

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/727,812	ALBRECHT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dan I Davidson	2651	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to December 3, 2003.
2. ☒ The allowed claim(s) is/are 1-5.
3. ☒ The drawings filed on 03 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>12032003</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                               | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

### **REASONS FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance:

Re claim 1; the prior art of record, and in particular Parkin (US 5,583,727 A), Chou (5,820,769 A), and Litvinov et al (US 6,660,357 B1), fails to teach or suggest that each cell in an island comprising at least two stacked magnetic cells is a single magnetic domain having a magnetic moment oriented in one of two opposite directions substantially perpendicular to the substrate, the cell closest to the substrate in each of the islands having a coercivity greater than the other cells in the islands; applying a first magnetic field to an island to switch the orientation of the magnetic moment of at least one cell in the island without switching the orientation of the magnetic moment of the cell closest to the substrate; and applying a second magnetic field having a strength greater than the first field to an island to switch the orientations of the magnetic moments of all the cells in the island.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Litvinov et al (US 6,660,357 B1) teach a perpendicular recording medium having a soft magnetic underlayer including at least two soft magnetic layers separated by a thin non-magnetic layer.

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Fullerton et al (US 6,391,430 B1) teach a magnetic recording disk patterned into discrete magnetic and nonmagnetic regions, whereby the magnetic layer consists of first and second films antiferromagnetically coupled. Ions irradiated through a patterned mask destroy the antiferromagnetic coupling between the two films.

Yamane et al (US 5,844,755 A) teach a giant magnetoresistive medium having a pair of ferromagnetic layers, a nonmagnetic interlayer, and an antiferromagnetic layer.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan I Davidson whose telephone number is (703) 308-8535. The examiner can normally be reached on Mondays, Tuesdays, and Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran, can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**DID**  
Dan I Davidson  
December 3, 2004

  
**SINH TRAN**  
**PRIMARY EXAMINER**